AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

1-91. Cancelled.

92.   (New) A method of automated sample processing comprising the steps of:

introducing a first at least one sample into a sample processing system, the sample processing system being configured to automatically process the first at least one sample using a plurality of desired sample process operations comprising one or more processing events;

creating an initial schedule of the one or more processing events for the sample processing system;

processing the first at least one sample according to the initial schedule;

during processing of the first at least one sample according to the initial schedule, receiving a second at least one sample into the sample processing system; and

adaptively rescheduling the processing events of the initial schedule to create an altered schedule of the one or more processing events.

93.   (New) A method according to claim 92, wherein the sample processing system is an automated slide processing system.

94.   (New) A method according to claim 93, wherein processing events include:

    arranging a plurality of slides on a carrier retainment assembly;

    applying a reagent to said plurality of slides; and

    automatically staining said plurality of slides.

95.   (New) A method according to claim 92, further comprising the step of discontinuing processing of the first at least one sample according to the initial schedule and commencing processing of the first at least one sample according to the altered schedule.

96.   (New) A method according to claim 92, wherein rescheduling includes running one or more simulations using varied schedules in order to determine the altered schedule of processing events.

97.   (New) A method according to claim 96, wherein the simulations utilize one or more parameters selected from a group consisting of: a substance priority parameter, a reagent grouping parameter, a robotic movement parameter, a sample location priority parameter, a sample proximity priority parameter, a sample insert time priority parameter, a user input parameter, a user priority parameter, a sample time since last processing priority parameter, a time- based priority value parameter, and a sample weighting parameter.